

**Project Development Phase**  
**Model Performance Test**

Date	10 November 2022
Team ID	PNT2022TMID355475
Project Name	Project - Smart Lender - Applicant Credibility Prediction for Loan Approval
Maximum Marks	10 Marks

**Model Performance Testing:**

Project team shall fill the following information in model performance testing template.

Performance metrics:

KNN model

	precision	recall	f1-score	support
0	0.78	0.49	0.60	51
1	0.83	0.95	0.89	134
accuracy			0.82	185
macro avg	0.81	0.72	0.74	185
weighted avg	0.82	0.82	0.81	185

Confusion matrix -  $\begin{bmatrix} 29 & 22 \\ 35 & 99 \end{bmatrix}$

KNN model

	precision	recall	f1-score	support
0	0.78	0.49	0.60	51
1	0.83	0.95	0.89	134
accuracy			0.82	185
macro avg	0.81	0.72	0.74	185
weighted avg	0.82	0.82	0.81	185

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### Gaussian Naives Bayes model

	precision	recall	f1-score	support
0	0.91	0.41	0.57	51
1	0.81	0.99	0.89	134
accuracy			0.83	185
macro avg	0.86	0.70	0.73	185
weighted avg	0.84	0.83	0.80	185

Confusion matrix -  $\begin{bmatrix} 21 & 30 \\ 2 & 132 \end{bmatrix}$

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#### Gaussian Naives Bayes model

	precision	recall	f1-score	support
0	0.91	0.41	0.57	51
1	0.81	0.99	0.89	134
accuracy			0.83	185
macro avg	0.86	0.70	0.73	185
weighted avg	0.84	0.83	0.80	185

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### XGBOOST model

	precision	recall	f1-score	support
0	0.79	0.45	0.58	51
1	0.82	0.96	0.88	134
accuracy			0.82	185
macro avg	0.81	0.70	0.73	185
weighted avg	0.81	0.82	0.80	185

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XGBOOST model

	precision	recall	f1-score	support
0	0.79	0.45	0.58	51
1	0.82	0.96	0.88	134
accuracy			0.82	185
macro avg	0.81	0.70	0.73	185
weighted avg	0.81	0.82	0.80	185

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Decision Tree model

	precision	recall	f1-score	support
0	0.48	0.57	0.52	51
1	0.82	0.77	0.80	134
accuracy		0.71		185
macro avg	0.65	0.67	0.66	185
weighted avg	0.73	0.71	0.72	185

Confusion matrix - [[28 23]  
[35 99]]

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Decision Tree model

	precision	recall	f1-score	support
0	0.48	0.57	0.52	51
1	0.82	0.77	0.80	134
accuracy			0.71	185
macro avg	0.65	0.67	0.66	185
weighted avg	0.73	0.71	0.72	185

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